

Remarks

Claims 1, 6, 7 and 10 are rejected as anticipated by US 2004/0127619 (Sun et al.).

Without prejudice or disclaimer to swearing behind the effective date of this reference, this rejection is respectfully traversed as not supported by the content of this reference. Sun et al. does not involve self-dispersing pigments. This invention is directed to inks having self-dispersing pigment, as expressly stated in line two of claim 1, the only independent claim of this application. Accordingly, since Sun et al. does not teach a self-dispersing pigment in an ink, it could not constitute an anticipation of the claims (claims 6, 7 and 10 being dependent on claim 1). It is noted that the rejection does not reference a part of Sun et al. for a teaching a self-dispersing pigment. Separately and additionally, the teachings of nitrogen-containing constituents cited in the rejection as at paragraph [0059], do not encompass an amine function group as claimed. This is discussed more fully immediately below with respect to the Butler reference (the listing of “pyrrolidone” immediately followed by “N-methyl-2-pyrrolidone” is logically understood as pyrrolidone being the non-methyl-substituted 2-pyrrolidone).

Claims 1, 2, 6, and 7 are rejected as anticipated by the Butler et al US Patent No.6,638,350 (Butler). As the rejection references 35 U.S.C. 102(b), the rejection is understood to be based the Feb. 6, 2003, publication date of Butler. Without prejudice or disclaimer to swearing behind the effective date of this reference, this rejection is respectfully traversed as not supported by the content of the reference. This rejection cites column 1, lines 47-59 of Butler for teaching a cyclic nitrogen-containing compound. However, as discussed in the first amendment filed, the claims are to amine functional groups (and to tetrahydrofurfuryl amine, apparently not an issue in this Official Action). The amine functional groups is well recognized as being a nitrogen substituted with any alkyl or aryl. Where the nitrogen is substituted with something else, it is not an amine functional group. When the nitrogen is

substituted with a carbon having a doubled bonded oxygen, that functional group, of course, is an amide functional group. Accordingly, the 2-pyrrolidone found at column 1, line 50 of Butler, has an amide functional group and no amine functional group. Accordingly, Butler does not teach an ink with a component having an amine function group as claimed and could not constitute an anticipation of independent claim 1, and therefore of claims 2, 6, and 7, which are dependent on claim 1.

Claims 1, 6, 7 and 11 are rejected as being anticipated by the Beach et al U.S. Patent No. 5,719,204 (Beach). This is respectfully traversed. Just as discussed with respect to Sun et al. in the foregoing, Beach does not teach a self-dispersing carbon black and therefore could not anticipate claim 1 or claims 6, 7 and 11, which are dependent on claim 1. Separately, just as discussed with respect to Butler in the foregoing, Beach does not teach a n amine component in the ink as claimed and therefore could not anticipate claim 1 or claims 6, 7 and 11, which are dependent on claim 1. The rejection cited the paragraph bridging column 9 to column 10 of Beach for a cyclic nitrogen-containing compound. That is a long list, but none have an amine functional group as claimed (the listing of "pyrrolidone" immediately followed by "N-methyl-2-pyrrolidone" is logically understood as pyrrolidone being the non-methyl-substituted 2-pyrrolidone).

Claims 1-4, 6, 7 and 10-14 are rejected an obvious over the Beach, Butler, and Sun et al. references as applied in the anticipation rejections and further in view of Sun, Patent No. 6,402,825 (Sun 6,402,825). Sun 6,402,825 is cited for teaching a surface-modified pigment and use of a binder.

Assuming Pub. No. US 2004/0127619 is prior in time, at the time this invention was made the subject matter of Pub. No. US 2004/0127619 A1 (now also U.S. Patent No. 6,896,724 B2) this application were commonly owned by obligation to assign by Lexmark

International, Inc. Accordingly, Pub. No. US 2004/0127619 A1 (Sun et al) is removed as a reference for purposes of obviousness pursuant to 35 U.S.C. 103(c).

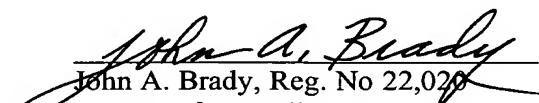
Moreover, as discussed in the foregoing, Butler has no teaching of the claimed materials with amine functional groups as claimed and Beach has no teaching of either self-dispersing pigment or materials with amine functional groups as claimed. Sun 6,402,825 is cited for teaching a surface modified pigment and a binder in an ink, but this does not suggest employing the amine functional groups as claimed. Accordingly, claim 1 necessarily distinguishes over the references cited. Claims 3-6, 7 and 10-14 are both more specific and take their patentability by being dependent on claim 1.

Claim 6 is rejected as indefinite for not specifying molecular weight as number, weight or other average. However, the molecules in the specification which support claim 6 are not polymers and accordingly, are not subject to being described as an average. Moreover, the molecular weight claimed is much less than that of a typical polymer. Reconsideration is respectfully requested.

Allowance of claims 5 and 8 if written in independent form is noted.

Accordingly, reconsideration is due course is respectfully requested, followed by allowance of claim 1-8 and 10-14, all of the pending claims.

Respectfully submitted,
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